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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,855	11/12/2003	John Warren Maly	200208463-1	8646

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EXAMINER

SILVER, DAVID

ART UNIT	PAPER NUMBER
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2128

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/29/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/712,855	MALY ET AL.	
	Examiner	Art Unit	
	David Silver	2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02 Dec 2003</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-20 are pending in Instant Application.

Priority

2. Priority is not claimed (**Effective Filing: 11/12/2003**).

Information Disclosure Statement

3. The information disclosure statement filed 12/3/03 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

The references listed on the IDS refer to patent literature which was not made public and therefore shall not be considered. See 37 CFR 1.98(d)). Therefore to be considered, Applicants must submit a copy of the portions they wish to be considered. This is required to obviate any possibility of confusion as to which portions of the non-published references were submitted for consideration (and at which time) and construct a clear record.

Claim Objections

4. Claims 2, 3, 7, 9, 17, and 18 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Specifically, the claims contain a single conditional limitation. When said condition evaluates to false the claims fail to further limit the parent claim. See Claim Interpretation below.

Claim Interpretation

5. Limitations drawn to allowing, enabling or making optional a function's performance do not further limit a claim. As such, any prior art not explicitly prohibiting the performance of the function inherently anticipates the limitation.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 1-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

6.1 In this instance, absent an explicit and deliberate definition in the specification that the product includes an appropriate medium or hardware elements, the claims are directed to software, *per se*. Note exemplary claim 15 which recites only software elements. Additionally, software, *per se*, is not considered concrete (MPEP 2106). The Specification recites "the storage medium may include (but is not limited to) any electronic, magnetic, optical, or other storage device, or any transmission medium" (**Spec: page 23**) (emphasis added). Meaning absent a tangible hardware element, the claim is drawn to intangible transmission medium and software elements *per se*. Therefore, the claim is drawn to non-statutory subject matter because it does not (1) have hardware elements and (2) does not produce a concrete useful *tangible* final result.

- 6.2 Regarding claim 20, the 'means for' can be software *per se* according to the Specification (**Spec: page 22**).

MPEP 2106 recites, in part:

"...USPTO personnel shall review the claim to determine it produces a useful, tangible, and concrete result. In making this determination, the focus is not on whether the steps taken to achieve a particular result are useful, tangible, and concrete, but rather on whether the final result achieved by the claimed invention is "useful, tangible, and concrete." (emphasis added)

- 6.3 The method claims do not produce a useful, tangible, and concrete final result. The steps of the method claims do not produce a useful, tangible, and concrete result. They merely recite a software algorithm, *per se*, which, for example, does not display, store, or otherwise provide a useful tangible output. Note exemplary claim 1 which only recites software steps and does not produce a useful tangible and concrete final result. See MPEP 2106 [R-5] (partially recited above).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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7. Claims 5 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being **indefinite** for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "enough information" in claim 5 and 6 is a relative term which renders the claim indefinite. The term "enough" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

8. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: verifying events generated by an agent (as mentioned in the preamble).
9. Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: testing the operation of a memory agent (as mentioned in the preamble).
10. The above cited rejections are merely exemplary.
11. The Applicant(s) are respectfully requested to correct all similar errors.
12. Claims not specifically mentioned are rejected by virtue of their dependency.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Sharma (**USP 6,412,046**).

Sharma discloses: 1. A computer implemented method of verifying events generated by an agent, said method comprising:

detecting a stimulus at an input of said agent; determining whether generation of an event by said agent in response to said stimulus is conditional (**col: 3 line: 14-25; col: 2 line: 48-59**);

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creating an expectation of said event based at least in part on said stimulus, wherein said agent is expected to generate said event (**col: 1 line: 17-20; col: 4 line: 49-64; Fig 4, 5, 6 and description col: 2 line: 48-59**);

indicating that said expectation is speculative if said generation of said event is conditional, so that said expectation is a speculative expectation (**col: 2 line: 48-59; col: 7 line: 42-49; Fig 5 item 500 and Figure's description**).

Sharma discloses: 2. The method of claim 1, wherein said generation of said event is conditional if said stimulus is a response containing an unmodified copy of requested data and other sources accessible by said agent may contain a modified copy of said requested data (**col: 1 line: 20-25 "stale copy"**).

Sharma discloses: 3. The method of claim 1, wherein said generation of said event is conditional if said stimulus comprises a local read request response by a memory local to said agent (**Fig 4, 5, 6 and description; col: 4 line: 1-11**).

Sharma discloses: 4. The method of claim 1, further comprising determining whether said event is expected based at least in part on said stimulus before creating said expectation of said event (**Fig 4, 5, 6 and description; Fig 5 description**).

Sharma discloses: 5. The method of claim 1, further comprising determining whether enough information has been received by said agent to resolve said conditional generation of said event (**Fig 4, 5, 6 and description; Fig 5 description**).

Sharma discloses: 6. The method of claim 5, wherein said determining whether enough information has been received comprises determining whether all snoop responses have been received by said agent (**col: 3 line: 14-26; col: 1 line: 58-60; col: 2 line: 60-67; col: 4 line: 16-21**).

Sharma discloses: 7. The method of claim 1, further comprising converting said speculative expectation to a non-speculative expectation by changing said indication that said expectation is speculative if conditions indicate that said event should be generated by said agent (**col: 3 line: 14-26; col: 1 line: 58-60; col: 2 line: 60-67; col: 4 line: 16-21; Fig 4, 5 and descriptions**).

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Sharma discloses: 8. The method of claim 7, wherein said conditions comprise said agent receiving all expected snoop responses, said expected snoop responses containing no modified data (**col: 1 line: 20-25 "stale copy"**).

Sharma discloses: 9. The method of claim 1, further comprising deleting said speculative expectation if conditions indicate that said event should not be generated by said agent (**Fig 5 item 500 and Figure's descriptions**).

Sharma discloses: 10. The method of claim 9, wherein said conditions comprise said agent receiving a snoop response containing modified data (**col: 1 line: 23-25; col: 2 line: 31-37**).

Sharma discloses: 11. The method of claim 11 further comprising: detecting said event at an output of said agent; and checking said expectation to verify whether said agent correctly generated said event (**Fig 5 item 550 505, 510, 545. 555 and Figure's descriptions**).

Sharma discloses: 12. The method of claim 1, further comprising: detecting an outgoing event at an output of said agent; and checking a list of expectations of events to verify whether said agent correctly generated said outgoing event (**col: 7 line: 15-20; Fig 5 item 550 505, 510, 545. 555 and Figure's descriptions**).

Sharma discloses: 13. The method of claim 1, wherein said generation of said event is conditional, said method further comprising: detecting an outgoing event at an output of said agent; and storing an indication that said outgoing event occurred in said speculative expectation (**col: 7 line: 42-49**).

Sharma discloses: 14. The method of claim 13, further comprising: detecting information at said input of said agent indicating that said event corresponding to said speculative expectation should not be generated by said agent; and signaling an error indicating that said outgoing event should not have occurred (**col: 7 line: 15-20; Fig 5 and description**).

As per claims 15-17, 19-20, note the rejection of claims 7, 2, 9, 8, 1 above, respectively. The Instant Claims recite substantially same limitations as the above-rejected claims and therefore rejected under same prior-art teachings.

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Sharma discloses: 18. The apparatus of claim 17, wherein said condition is not satisfied if said memory agent receives a modified copy of requested data (**col: 1 line: 20-25**).

Conclusion

14. All claims are rejected.

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Silver whose telephone number is (571) 272-8634. The examiner can normally be reached on Monday thru Friday, 10am to 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah can be reached on 571-272-2279. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Silver
Patent Examiner
Art Unit 2128


KAMINI SHAH
SUPERVISORY PATENT EXAMINER